

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for identifying a compound that modulates the level of a lipid or lipoprotein in ~~nematode~~ C. elegans comprising: (a) contacting a compound with test ~~nematode~~ C. elegans; (b) comparing a phenotype of said test ~~nematode~~ C. elegans with said phenotype of ~~nematode~~ C. elegans not contacted with said compound, wherein a modification of said phenotype correlates with a modulated level of a lipid or lipoprotein, said phenotype being selected from the group consisting of (i) length of defecation cycle; (ii) rate of germ line development relative to rate of soma development; (iii) rate of embryonic development; and (iv) rate of post-embryonic development, whereby a difference in said phenotypes identifies said compound; wherein the test C. elegans comprise (a) at least one mutation in the clk-1 gene; (b) at least one mutation in the clk-1 gene and at least one mutation in the dsc-3 gene; or (c) at least one mutation in the clk-1 gene and at least one mutation in the dsc-4 gene.

2. – 5. (Canceled)

6. (Currently amended) A method for selecting ~~nematode~~ C. elegans having a modulated level of a lipid or lipoprotein comprising: (a) ~~treating test nematode to modulate the level of a lipid or lipoprotein C. elegans with a compound; and~~ (b) identifying test ~~nematode~~ C. elegans that exhibit a phenotype that is modified as compared to the phenotype of ~~nematode~~ C. elegans that have not been treated, wherein ~~a modulated level of a lipid or lipoprotein in said test nematodes is indicated by the phenotype that is modified,~~ said phenotype ~~being is~~ selected from the group consisting of (i) length of defecation cycle; (ii) rate of germline development relative to rate of soma development; (iii) rate of embryonic development; and (iv) rate of post-embryonic development; and (c) selecting C. elegans having a modulated level of a lipid or lipoprotein based on the phenotype that is modified.

7. (Canceled)

8. (Currently amended) The method of claim 1, ~~2 or 3~~, wherein the phenotype of said test ~~nematode~~ C. elegans in step (b) is modified by (i) a decreased length of defecation cycle; (ii)

an increased rate of germline development relative to rate of soma development; (iii) an increased rate of embryonic development; or (iv) an increased rate of post-embryonic development.

9.-28. (Canceled)

29. (Currently amended) The method of claim 1 or 26, wherein said lipid is cholesterol.

30. (Currently amended) The method of claim 1 or 26, wherein said lipoprotein is LDL-like lipoprotein.

31. (Currently amended) The method of claim 1 or 26, wherein a modified phenotype is detected by (i) visual inspection of the phenotype; (ii) the expression profile of one or more indicator genes; (iii) the expression of one or more reporter genes; (iv) a change in the level and/or distribution of a lipid or lipoprotein in the test ~~nematode~~ C. elegans.